

REMARKS/ARGUMENT

Description of claims

Claims 1, 3-5, 7-14, 16-29 and 31-37 are pending in the application. Claims 7, 11, 12, 14 and 19-22 are withdrawn. Claims 1, 3-5, 8-10, 13, 16-18, 23-29 and 31-37 stand rejected.

Claims 31 and 36 were amended to clarify that the second fluid is not the same as the first fluid. No new matter was added. No new issues are present by these amendments.

Applicants respectfully request reconsideration in view of the foregoing arguments/remarks presented below.

Telephonic Interview

Applicants wish to thank the Examiner for the Telephonic Interview on August 5, 2008 with Examiner Lin, Robert Auerbach, and Cameron Kerrigan. Applicants representatives discussed the prior art of record and the present claims, but no decisions were reached by either party.

Rejections under 35 U.S.C. §112(a)

Claims 10, 18, and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement.

Claims 10, 18, and 28 are rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. Applicants traverse for at least the following reasons.

In the present Office Action on page 2, the Examiner alleges that “there is no teaching that any or all of these fluids are of the type to physically entrap an impurity without dissolving the impurity.” (emphasis added) This statement is incorrect. On page 8, lines 19-20 of the specification, it is disclosed as an example that “low molecular weight components (i.e., molecules having less than 1000 daltons) can be removed by being suspended by water.” Water

is listed as one of the possible components in claims 10 and 18, and water can be used as a component in claim 28. Thus, Applicants have demonstrated that at least one of these fluids is of the type to physically entrap an impurity without dissolving the impurity.

Additionally, in the present Office Action on page 8, the Examiner states that "However, water as a fluid is only one of many of the fluids listed in the claims. Applicant has not shown possession of the other fluids being of the type to physically entrap an impurity without dissolving the impurity." This is not the proper standard to use for a §112, first paragraph rejection.

The standard for a §112, first paragraph rejection is whether the description of the invention in the specification can "enable any person skilled in the art . . . to make and use the same." In the present invention, definitions of "solvent" and "non-solvent" are given on page 8. The type of impurity will influence the solvent choice based on the "solvent" and "non-solvent" criteria given on page 8. Therefore, the Applicants have reasonably conveyed to one skilled in the relevant art that they had possession of the claimed invention.

First, the Examiner asserted in the prior Final Office Action dated February 12, 2008 that no fluids are disclosed that are of the type to physically entrap an impurity without dissolving the impurity. Next, Applicants replied in the Response dated April 14, 2008 showing that water was clearly disclosed in the application. Now, after acknowledging that water is disclosed on page 7 of the present Office Action, the Examiner repeats the same rejection again, stating that there is no teaching that any or all of the fluids are of the type to physically entrap an impurity without dissolving the impurity. Using the Examiner's criteria to show written description, Applicants would need to identify every type of possible impurity and every type of solvent and non-solvent pairing. This is clearly an impossible task and is not the standard under §112, first paragraph.

Reconsideration and withdrawal of the §112 rejections of claims 10, 18, and 28 are respectfully requested.

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Rejections under 35 U.S.C. §103(a)

1. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Publication 2004/0063663 (“Buchanan”), in view of U.S. Patent 5,762,944 (“Inoue”), and U.S. Patent 5,756,659 (“Hughes et al.”).

Independent claim 31 requires “introducing a first fluid … acting as a solvent for the impurity” and “introducing a second fluid … acting as a non-solvent for the impurity.” Applicant submits that the cited references, individually and when combined, fail to teach or suggest this limitation. The Examiner stated that it would have been obvious “to have used any combination of solvents, including the use of a solvent together with a non-solvent … because Hughes teaches that more than one fluid can be used.” Applicants respectfully disagree.

Applicants have identified two approaches to removing impurities from a polymer: by dissolving the impurity and by entrapping the impurity without dissolving the impurity (specification page 8, lines 4-10), the latter approach capable of removing low molecular weight components (specification page 8, lines 19-20). None of the cited references recognize a distinction between using solvents and non-solvents and none teach or suggest the desirability of using a combination of a solvent and a non-solvent to remove impurities from a polymer. Hughes merely provides that “the stripping agent(s) should have a vapor pressure sufficient to either be a gas or form gas bubbles…” (col. 6:64-66). The Examiner has not provided any line of reasoning as to why a person of ordinary skill in the art, at the time of the invention, would introduce “a first fluid … acting as a solvent for the impurity” and “a second fluid … acting as a non-solvent for the impurity,” as required by claim 31. Instead, the Examiner has impermissibly applied an “obvious to try” rationale where none of the cited references gives an indication of what parameter is critical (i.e., solubility). See MPEP 2145, X, B. Accordingly, Applicants respectfully request removal of this rejection.

Further, the Examiner, continues to assert that water could be both the first and second fluid in the claims. Even before Applicants clarified claim 31 with the present amendment, it is clear that the two fluids are not the same. If the fluids were the same, then there would be no reason to apply the second fluid unless one did not apply enough of the first fluid initially. The

claim says “the second fluid acting as a non-solvent for the impurity” which implies that the second fluid removes more of “the impurity.”

Claims 32 and 33 depend from claim 31 and are patentably allowable over Buchanan, Inoue, and Hughes for at least the same reasons as claim 31.

2. Claims 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan, Inoue, and Hughes, as applied to claim 31, and further in view of U.S. Patent 6,156,345 (“Chudzik”).

Claim 31 requires “introducing a first fluid … acting as a solvent for the impurity” and “introducing a second fluid … acting as a non-solvent for the impurity.” As indicated above in the prior section, Buchanan, Inoue, and Hughes individually and when combined, fail to teach or suggest this limitation of claim 31. Chudzik fails to cure this deficiency of Buchanan, Inoue, and Hughes. Accordingly, Applicant respectfully submits that claim 31-34 are patentably allowable over the cited references.

3. Claims 1, 3-5, 8-10, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan, in view of Inoue, and Hughes, and U.S. Patent 4,117,714 (“Goodson et al.”).

Claim 1 recites: “the fluid is of a type to physically entrap the impurity without dissolving the impurity.” Applicant respectfully submits that the cited references, individually and when combined, fail to teach or suggest this limitation of claim 1.

The Examiner stated that “Buchanan, Inoue, and Hughes do not explicitly teach that the fluid is a type to physically entrap the impurity without dissolving the impurity.” The Examiner further cites Goodson and states that Goodson teaches that “there are only a finite number of identified, predictable potential solutions in the method of removing impurities.” Applicants respectfully submit that none of the portions of the Goodson reference cited by the Examiner, nor any other portions, teach the above statement. The cited portion of Goodson teaches that “the air 18 is scrubbed as it passes through and above the rotating film 20 and any impurities therein are dissolved or entrapped in the water film.” See (col. 3, lines 39-42).

The Examiner continues to grossly exaggerate the teachings of Goodson. As stated in the prior response dated April 14, 2008, at most, Goodson teaches that impurities may be removed from air by passing them through a film of water. It is an impermissible stretch to say that this statement generally teaches that there are only a finite number of predictable solutions for removing impurities. Applicants can think of several different ways to remove impurities using conventional or unconventional ways, including CO₂ extraction, using enzymes, using bacteria, using settling techniques. . and the list goes on.

Accordingly, the Examiner has provided no support or explanation as to why an organic solvent or water of Inoue must necessarily (1) physically entrap monomers and (2) would not dissolve the monomers. Therefore, Applicants respectfully request reconsideration and withdrawal of this rejection.

4. Claims 13, 16-18, and 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan, Inoue, and Hughes and Goodson as applied to claim 1 and further in view of EP Patent 0623354 ("Berg et al.").

Claim 13 recites: "wherein the fluid is of a type to physically entrap the impurity without dissolving the impurity." As indicated above for claim 1, Buchanan, Inoue, Hughes, and Goodson individually and when combined, fail to teach or suggest this limitation of claim 13. Berg et al. fail to cure this deficiency of Buchanan, Inoue, and Hughes. Accordingly, Applicant respectfully submits that claim 13 is patentably allowable over the cited references.

Claims 16-18 and 36-37 depend from claim 13 and are patentably allowable over the cited references for at least the same reasons as claim 13.

5. Claims 23-27 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buchanan, in view of Inoue, Hughes, as applied to claim 1, and further in view of U.S. Patent 6,096,369 ("Anders et al.").

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Amended Claim 23 recites “the fluid is selected from the group consisting of FLUX REMOVER AMS, dimethyl acetamide, dimethyl formamide, dimethyl sulfoxide, and combinations thereof.”

Applicants respectfully disagree that the limitations of claim 1 apply to claim 23 as asserted by the Examiner. Claim 23 is an independent claim.

With respect to claim 23 of the present invention, Anders et al. teach the extraction of monomers using “water and subsequently an organic solvent such as cyclohexane.” Anders et al. col. 9, line 67 to col. 10, line 1. Thus, two fluids, including water as the first fluid, are necessary according to Anders et al. to extract the residual monomers. By contrast, claim 23 of the present invention requires only one fluid, that does not include water to extract the impurities. Thus, one of skill in the art would not look to Anders et. al. for guidance in selecting fluids for the present invention. Claim 29 uses two fluids, however, the first fluid is not water as taught by Anders et al. Therefore, the combination of Buchanan, Inoue, Hughes and Anders et al. does not teach or suggest the present invention. Reconsideration and withdrawal of the rejections are respectfully requested.

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Conclusion

In light of the foregoing claim amendments and remarks, this application is considered to be in condition for allowance, and early passage of this case to issue is respectfully requested. If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-0150.

Respectfully submitted,

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